GAVINS POINT MAINTENANCE YARD SECURITY GATE

1.SCOPE OF WORK: Contractor shall furnish all materials, labor, and equipment needed to replace two existing 7' X 24' galvanized swing gates and install two new commercial aluminum Cantilever Slide Gates (chain link w/barb wire) that meets ASTM F-1184. Gates will include gate operators, four key pads, and 20 key chain sized remotes for use by maintenance personnel. The opener shall have an adjustable delay to allow the gate to automatically close after vehicle passes through. Contractor will also be responsible for the installation of the removed south gate into a location specified by the government representative, the north gate will be disposed of by the contractor. At another location on the project contractor shall be responsible for the removal, disposal of existing fence, and installation of a new 5' high by 405' of galvanized chain link fence, without barb wire.

1.6.7 All Contractor and all associated sub-contractors employees shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative). The Contractor shall also provide all information required for background checks to meet installation access requirements to be accomplished by installation Provost Marshal Office, Director of Emergency Services or Security Office. Contractor workforce must comply with all personal identity verification requirements as directed by DOD, HQDA and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in Contractor security matters or processes. No background checks are required for this contract.

1.6.8 Special Qualifications

The Contractor must pre-screen Candidates using the E-verify Program (http://www.dhs.gov/E-Verify) website to meet the established employment eligibility requirements. The Vendor must ensure that the Candidate has two valid forms of Government issued identification prior to ensure the correct information is entered into the E-verify system. An initial list of verified/eligible Candidates must be provided to the COR no later than 3 business days after the initial contract award. When contracts are with individuals, the individuals will be required to complete a Form I-9, Employment Eligibility Verification, with the designated Government representative. This Form will be provided to the Contracting Officer and shall become part of the official contract file.

2. BEST VALUE: Award to the successful contractor shall be based on "Best Value" rather than low bid per. The bids will be based on the following factors:

Factor 1 - Past Performance - The contractor shall provide three references of projects completed within the past three years. These references need to be equal to or similar in scope of this requirement. Contractor shall provide dates and pertinent information to demonstrate how they are comparable to this requirement in size and complexity. The contractor should be a commercial specialty service provider involved in the installation of cantilever slide gates. The contractor shall include points of contact, titles, telephone numbers, and email addresses (if available) for all references.

- Factor 2 Technical Factors Technical factors will concentrate on the capacity and the qualifications of the contractor's ability to provide quality work.
- a. Subfactor 1 Contractor Approach Contractors shall submit a proposal describing the approach to be used to accomplish the project objectives that meet the standards of the performance work statement.
- b. Subfactor 2 Time for completion of contract Contractor shall propose a schedule for the time required to procure material, initiate work and complete project.

Factor 3 - Price

Factors 1 and 2 when combined are significantly more important than price.

- 3. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK: The Contractor will be required to commence work under this contract on the date of receipt by him of Notice to Proceed, to prosecute said work diligently and to complete the entire work within 30 days. The time stated for completion shall include final cleanup of the premises.
- 4. CONTRACT DRAWINGS AND SPECIFICATIONS: Omissions from the drawings or specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work but they shall be performed as if fully and correctly set forth and described in the drawing and specifications. The Contractor shall check all drawings furnished him immediately upon their receipt and shall promptly notify the Contracting Officer of any discrepancies.
- 5. GOVERNMENT FURNISHED MATERIAL: Government personnel shall bury the electrical wire needed to feed the operators.
- **6. APPROVAL OF MATERIALS**: The Contracting Officer's Representative shall approve all additional materials needed before being used in subject contract.
- 7. TAXES Nebraska. N/A
- **8. PROTECTION OF EXISTING FACILITIES:** Contractor shall be responsible for protection of existing structures, roadways and parking lots in the construction area.
- **9. ENVIRONMENTAL PROTECTION:** In order to prevent, and to provide for abatement and control of, any environmental pollution arising from the construction activities in the performance of this contract, the Contractor and his sub-contractors shall comply with all applicable federal, state and local laws and regulations concerning environmental pollution control and abatement.
- a. Notification: The Contracting Officer will notify the Contractor in writing of any non-compliance with the aforementioned federal, state or local laws or regulations. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. The Contractor shall, after receipt of such notice, immediately inform the Contracting Officer of proposed corrective action and take such action as

may be approved. If the Contractor fails or refuses to comply promptly, the contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall make the subject of a claim for extension of time or no part of the time lost due to any such stop orders for excess costs or damages.

- 10. SAFETY REQUIREMENTS: The Contractor shall ensure that safe working practices are utilized and that all equipment meets the requirements of the US Army Corps of Engineers, "Safety and Health Requirements Manual", EM 385-1-1, November 2014, before work begins. A copy of the above manual is available at the Gavins Point Dam Project Office, Yankton, South Dakota P.O. Box 710.
- a. Ground Fault Circuit Interrupters: In addition to the requirements of paragraph 11.C.05 of EM 385-1-1, ground fault circuit interrupters are required for all extension cord systems.
- b. First Aid and Medical: First aid facilities shall be made available on the job site. Arrangements for emergency medical attention shall be made prior to start of work. All emergency numbers (doctor, hospital, ambulance, fire department) shall be posted, or made available at the work site.
- 11. HOUSEKEEPING: Daily clean up of all debris and waste materials are required. Adequate disposal containers shall be placed strategically around the site. Debris shall be removed on a regular basis.
- 12. AVAILABILITY AND USE OF UTILITY SERVICES: Use of public and private utilities will be as found available. The Contractor shall make his own arrangements for use of public and private utilities.
- 13. WORK AND MATERIALS GUARANTEE: The Contractor will guarantee materials for one year from the date the Government assumes use of the equipment or materials.
- 14. PAYMENT: Payment for subject work will be for entire work complete in conformance with these specifications.

SECTION 32 31 13 CHAIN LINK FENCES

PART 1 - GENERAL

1.1 DESCRIPTION

This work consists of all labor, materials, and equipment necessary for furnishing and installing chain link fence, gates and accessories in conformance with the lines, grades, and details as shown.

1.2 RELATED WORK

A. Removal and disposal of 405 lf of existing 5' high chain link fence.

1.3 MANUFACTURER'S QUALIFICATIONS

Fence, gates, and accessories shall be products of manufacturers regularly engaged in manufacturing items of type specified.

1.4 SUBMITTALS

- A. In accordance with, DRAWINGS, PRODUCT DATA AND SAMPLES, furnish the following:
 - 1. Manufacturer's Literature and Data: Chain link fencing, gates and all accessories.
 - 2. Manufacturer's Certificates: Zinc-coating complies with complies with specifications.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):

Al21-07Metallic Coated Carbon Steel Barbed Wire
A392-07Zinc-Coated Steel Chain-Link Fence Fabric
A491-11Aluminum Coated Steel Chain Link Fence Fabric
A817-07 Metal-Coated Steel Wire for Chain-Link Fence
Fabric and Marcelled Tension Wire
C94-12Ready-Mixed Concrete
F567-11aInstallation of Chain-Link Fence
F626-08Fence Fittings
F668-11Polyvinyl Chloride (PVC) and Other Organic

Polymer-Coated Steel Chain Link Fence Material

	F1184-05Industrial and Commercial Horizontal Slide
	Gates
	F1664-08Polyvinyl Chloride (PVC) and Other Conforming
	Organic Polymer Coated Steel Tension Wire used
	with Chain Link Fence
	F1665-08Polyvinyl Chloride (PVC) and Other Conforming
	Organic Polymer Coated Steel Barbed Wire used
	with Chain Link Fence
	F2200-11bAutomated Vehicular Gate ConstructionF900-11
	Industrial and Commercial Swing Gates
	F1043-1laStrength and Protective Coatings on Metal
	Industrial Chain-Link Fence Framework
	F1083-10Pipe, Steel, Hot-Dipped Zinc-Coated
	(Galvanized) Welded, for Fence Structures.
C.	Federal Specifications (Fed. Spec.):
	FF-P-110JPadlock, Changeable Combination

PART 2 - PRODUCTS

2.1 GENERAL

Materials shall conform to the above referenced publications for ferrous metals, zinc-coated; and detailed specifications forming the various parts thereto; and other requirements specified herein. Zinc-coat metal members (including fabric, gates, posts, rails, hardware and other ferrous metal items) after fabrication shall be reasonably free of excessive roughness, blisters and sal-ammoniac spots.

2.2 CHAIN-LINK FABRIC

- A. Steel Chain Link Fabric: 2 in. mesh, 9 gauge fabric, 5'.
 - 1. Zinc-Coated Steel Fabric: hot dipped galvanized before or after weaving.
 - a. Class 2 2.0 oz/ft2
 - 2. Fabric selvage: Standard fabric selvage for 2 in mesh 84 in. high and over is knuckle finish at one end, twist at the other, K&T. Fabric less than 84 in, knuckle finish top and bottom.

2.3 STEEL FENCE FRAMEWORK

A. Round steel pipe and rail: Group IA Heavy Industrial Fence Framework, schedule 40 galvanized pipe. Exterior zinc coating Type A, interior

zinc coating Type A. High Strength. Line post: Schedule 40 Pipe size 2 3/8"

- 1. End, Corner, Pull post: Schedule 40 size 2 7/8"
- 2. Brace rails, top, bottom, and intermediate rails, 1 5/8 in. Schedule 40

2.4 TENSION WIRE

- A. Metallic Coated Steel Marcelled Tension Wire: 7 gauge marcelled wire
 - 1. Type II Zinc-Coated Class 5 2.0 oz/ft2

2.5 BARBED WIRE

A. N/A

2.6 FITTINGS

- A. Tension and Brace Bands: Galvanized pressed steel, minimum steel thickness of 12 gauge, minimum width of 3/4 in. and minimum zinc coating of 1.20 oz/ft². Bands supplied with 5/16 in. or 3/8 in. galvanized steel carriage bolts.
- B. Terminal Post Caps, Line Post Loop Tops, Rail and Brace Ends, Boulevard Clamps, Rail Sleeves: Pressed steel galvanized after fabrication having a minimum zinc coating of 1.20 oz/ft².
- C. Truss Rod Assembly: 3/8 in. (9.53 mm) diameter steel truss rod with a pressed steel tightener, minimum zinc coating of 1.2 oz/ft², assembly capable of withstanding a tension of 2,000 lbs.
- D. Tension Bars: Galvanized steel one-piece length 2 in. less than the fabric height. Minimum zinc coating 1.2 oz. $/ft^2$.
 - 1. Bars for 2 in. and 1 % in. mesh shall have a minimum cross section of 3/16 in. by 3/4 in.
- E. Barbed Wire Arms: In compliance with ASTM F626, pressed steel galvanized after fabrication, minimum zinc coating of 1.20 oz. /ft, capable of supporting a vertical 250 lb load. Type I - three strand 45 degree.

2.7 TIE WIRE AND HOG RINGS

Tie Wire and Hog Rings: Galvanized minimum zinc coating 1.20 oz/ft 2 9 gauge (0.148) steel wire.

2.8 SWING GATES

A. N/A

2.10 CONCRETE

Concrete for post footings shall have a 28-day compressive strength of 3,000 psi.

PART 3 EXECUTION

3.1 CLEARING FENCE LINE

Clearing: Surveying, clearing, grubbing, grading and removal of debris for the fence line or any required clear areas adjacent to the fence. Surveying, clearing, grubbing, grading and removal of debris for the fence line or any required clear areas adjacent to the fence is included in the earthwork contractor's contract. The contract drawings indicate the extent of the area to be cleared and grubbed.

3.2 FRAMEWORK INSTALLATION

- A. Posts: Posts shall be set plumb in concrete footings. Minimum footing depth, 24 in. Minimum footing diameter four times the largest cross section of the post up to 4.00" O.D. and three times the largest cross section of post greater than 4.00". O.D. Gate posts require larger footings. Top of post concrete footing to be at grade and crowned to shed water away from the post. Line posts installed at intervals not exceeding 10 ft. on center.
- B. Top rail: When specified, install 21 ft. lengths of rail continuous thru the line post or barb arm loop top. Splice rail using top rail sleeves minimum 6 in. long. The rail shall be secured to the terminal post by a brace band and rail end. Bottom rail or intermediate rail shall be field cut and secured to the line posts using boulevard bands or rail ends and brace bands.
- C. Terminal posts: End, corner, pull and gate posts shall be braced and trussed for fence 6 ft. and higher.
- D. Tension wire: Shall be installed 4 in. up from the bottom of the fabric. Fences without top rail shall have a tension wire installed 4 in. down from the top of the fabric. Tension wire to be stretched taut, independently and prior to the fabric, between the terminal posts and secured to the terminal post using a brace band. Secure the tension wire to the chain link fabric with a 9 gauge hog rings 18 in. on center and to each line post with a tie wire. Install the top tension wire through the barb arm loop for fences having barbed wire and no top rail.

3.3 CHAIN LINK FABRIC INSTALLATION

A. Chain Link Fabric: Install fabric to outside of the framework. Attach fabric to the terminal post by threading the tension bar through the fabric; secure the tension bar to the terminal post with tension bands and 5/16 in. carriage bolts spaced no greater than 12 inches on center.

Small mesh fabric less than 1 in., attach to terminal post by sandwiching the mesh between the post and a vertical 2 in. wide by 3/16 in. steel bar using carriage bolts, thru bolted thru the bar, mesh and post spaced 15 in. on center. Chain link fabric to be stretched taut free of sag. Fabric to be secured to the line post with tie wires spaced no greater than 12 inches on center and to rail spaced no greater than 18 inches on center. Secure fabric to the tension wire with hog rings spaced no greater than 18 inches apart.

B. Tie wire shall be wrapped around the post or rail and attached to the fabric wire picket on each side by twisting the tie wire around the fabric wire picket two full turns. Excess wire shall be cut off and bent over to prevent injury. The installed fabric shall have a ground clearance on no more than 2 inches.

3.4 BARBED WIRE INSTALLATION

N/A

3.5 GATE INSTALLATION

A. N/A

3.6 NUTS AND BOLTS

Bolts: Carriage bolts used for fittings shall be installed with the head on the secure side of the fence. All bolts shall be peened over to prevent removal of the nut.

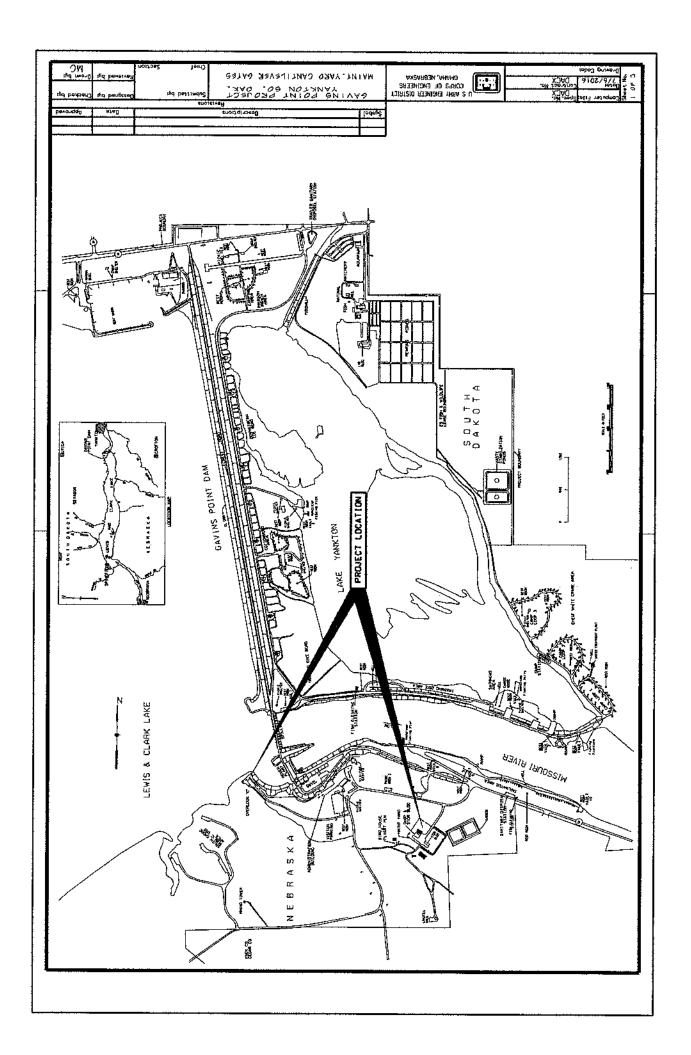
3.7 ELECTRICAL GROUNDING

Grounding: Grounding, when required, shall be specified and included in Contract Section 33 79 00. A licensed electrical contractor shall install grounding.

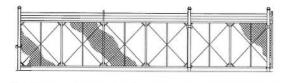
3.8 CLEAN UP

Clean Up: The area of the fence line shall be left neat and free of any debris caused by the installation of the fence.

---END---



STRUCTURAL CANTILEVER SLIDE GATE (CHAIN LINK)



PART 1 - GENERAL:

1.01 SECTION INCLUDES:

A. The work in this section shall include furnishing all labor, materials, equipment and appliances necessary to complete all Structural Cantilever Slide Gate(s) required for this project in strict accordance with this specification section and drawings.

1.02 REFERENCES:

- A. Underwriters Laboratory Gate Operator Requirements (UL 325). See 3.02 C.
 - 1. Automated / operated vehicular gates are not to be used for pedestrian traffic. Separate pedestrian gates must always be provided if pedestrian traffic is expected.
- B. ASTM F 2200 Standard Specification for Automated Vehicular Gate Construction. See 2.01 C.
- C. ASTM F 1184 Standard Specification for Industrial and Commercial Horizontal Slide Gates, Type II, Class 2. See 3.02 B.
- D. American Welding Society AWS D1.2 Structural Welding Code. See 2.01 D and 2.03 D.

1.03 SUBMITTAL:

A. Product Data:

- 1. Provide manufacturer's catalog cuts with printed specifications and installation instructions.
- 2. If operated gate system, furnish (2) copies of operation and maintenance data covering installed products.

B. Shop Drawings:

- 1. Supply shop drawings showing the gate system, including details of all major components.
- 2. Include complete details of gate construction, gate height and post spacing dimensions.

C. Certification of Performance Criteria:

- Manufacturer of gate system shall provide certification stating the gate system includes the following material components that provide superior performance and longevity. Alternate designs built to minimum standards that do not include these additional structural features shall not be accepted.
 - a. Gate track system shall be keyed to interlock into gate frame member (providing 200% additional strength when compared to weld only keyless systems). When

- b. interlocked with and welded to the "keyed" frame top member, gate track forms a composite structure.
- c. Gate shall have a minimum counterbalance length of 50% opening width which provides a 36% increase in lateral resistance (when compared to ASTM minimum of 40% counterbalance). If gate is ever to be automated, counterbalance section shall be filled with fabric or other specified material.
- d. To provide superior structural integrity, intermediate vertical members shall be used with spacing between verticals to be less than 50% of the gate frame height,
- e. Entire gate frame (including counterbalance section) shall include 2 adjustable stainless or galvanized steel cables (minimum 3/16") per bay to allow complete gate frame adjustment (maintaining strongest structural square and level orientation).
- f. Gate truck assemblies shall be tested for continuous duty and shall have precision ground and hardened components. Bearings shall be pre-lubricated and contain shock resistant outer races and captured seals.
- g. Gate truck assemblies shall be supported by a minimum 5/8" plated steel bolt with self aligning capability, rated to support a 2,000 # reaction load.
- h. Hanger brackets shall be hot dipped galvanized steel with a minimum 3/8" thickness that is also gusseted for additional strength.
- i. Gate top track and supporting hangar bracket assemblies shall be certified by a licensed professional engineer to withstand a 2,000 lb. vertical reaction load without exceeding allowable stresses.

D. Certifications:

- 1. Gate in compliance with ASTM F 2200, Standard Specification for Automated Vehicular Gate Construction per section 2.01 C.
- 2. If operated gate system, gate operator shall be in compliance with UL 325 as evidenced by UL listing label attached to gate operator.
- 3. The aluminum welders and welding process must be certified per section 2.03 D.
- 4. Manufacturer shall supply gate design performance certification as per section 1.03 C.

PART 2 - PRODUCTS:

2.01 CANTILEVER SLIDE GATE MANUFACTURERS:

- **A.** The cantilever sliding gate system shall be manufactured by an approved aluminum gate manufacture.
- **B.** Approved substitution All other systems must be submitted to the design team in accordance with substitution requirements as set forth in the general provisions of the specification manual for approval prior to the bid date. Products submitted after the bid date will not be approved.

- C. Gate manufacturer shall certify gate is manufactured in compliance with ASTM F 2200, Standard Specification for Automated Vehicular Gate Construction. See 1.03 D.1.
- D. Gate manufacturer shall provide independent certification as to the use of a documented Welding Procedure Specification and Procedure Qualification Record to insure conformance to the AWS D1.2 welding code. Upon request, Individual Certificates of Welder Qualification documenting successful completion of the requirements of the AWS D1.2 code shall also be provided. See 1.03 D.3.

2.02 GATE DIMENSIONS:

A. Structural Cantilever Slide Gate dimensions shall be as shown on the detail drawings.

2.03 GATE CONSTRUCTION DETAILS:

A. Gate Frame:

1. The gate frame shall be fabricated from 6063-T6 aluminum alloy extrusions. The top member shall be a 3" x 5" aluminum structural channel/tube extrusion weighing not less than 3.0 lb/lf (4.4kg/m). To maintain structural integrity this frame member shall be "keyed" to interlock with the "keyed" track member. If fabricated as a single horizontal piece, the bottom member shall be a 2" x 5" aluminum structural tube weighing not less than 2.0 lb/lf. If fabricated in two horizontal pieces, the bottom member shall be a 5" aluminum structural channel weighing not less than 2.65 lb/lf, and the two horizontal pieces or sections shall be spliced in the field (the gate frame shall be fabricated in one or multiple sections depending on size requirements or project constraints).

B. Vertical Members (Chain Link):

- 1. The vertical members at the ends of the opening portion of the frame shall be "P" shaped in cross section with a nominal base dimension of no less than 2" x 2" (51mm x 51mm) and weighing not less than 1.6 lb/lf (2.3kg/m). Major 2" x 2" (51mm x 51mm) vertical members weighing not less than 1.1lb/lf shall separate each bay and shall be spaced at less than gate height intervals.
- 2. Intermediate 1" x 2" (25mm x 51mm) vertical members weighing not less than .82 lb/lf (1.2kg/m) shall alternate between the 2" x 2" major members..

C. Gate Track:

- 1. The gate frame shall have separate semi-enclosed "keyed" tracks, extruded from 6005A-T61 or 6105-T5 aluminum alloy, weighing not less than 2.9 lb/lf. Track members are to be located on each side of the top member. When interlocked and welded to the "keyed" top member, it forms a composite structure with the top of the gate frame. Welds are to be placed alternately along the top and side of the track at 9" (229mm) centers with welds being a minimum of 2"(51mm) long.
- D. All welds on the gate frame shall conform to Welding Procedure Specification and Procedure Qualification Record to insure conformance to the AWS D1.2 Structural Welding Code. All individual welders shall be certified to AWS D1.2 welding code. See 1.02 D.

E. Gate Mounting:

- 1. The gate frame is to be supported from the track by four (4) swivel type, self-aligning, 4-wheeled, sealed lubricant, ball-bearing truck assemblies.
- 2. The bottom of each support post shall have a bracket equipped with a pair of 3" (76mm) UHMW guide wheels Wheel cover protectors shall be included with bottom guides to comply with UL325.
- 3. Gap protectors shall be provided and installed, compliant with ASTM F 2200.
- **F.** Diagonal "X" bracing of 3/16" or 1/4" diameter stainless or galvanized steel cable shall be installed throughout the entire gate frame.
- G. The gate shall be completed by installation of approved filler as specified.
 - 1. Chain Link: 2" x 2" x 9 gauge aluminized steel chain link fabric shall extend the entire length of the gate (if operated gate, counterbalance must also have fabric to prevent reach through and comply with ASTM F 2200, see 1.03 C.1) Fabric shall be attached at each end of the gate frame by standard fence industry tension bars and tied at each 2" x 2" (51mm x 51mm) vertical member with standard fence industry ties. ASTM F 2200 requires attachment method that leaves no leading or bottom edge protrusions (cannot exceed 0.5 inch).

2.04 **POSTS**:

A. Double sets of support posts shall be minimum 4" O.D. (102mm) round SS40 or 4" x 4" x 3/16" wall square steel tubing, grade 500. Gate posts shall be galvanized or coated and supported in concrete footings as specified by the design team.

2.05 FINISH:

A. Gate to be mill finish aluminum.

2.06 WARRANTY:

A. The truck assembly shall be warranted against manufacturing defects by the manufacturer for a period of (5) five years from date of sale.

PART 3 - EXECUTION:

3.01 Final grades and installation conditions shall be examined. Installation shall not begin until all unsatisfactory conditions are corrected.

3.02 INSTALLATION:

- A. Equipment in this section shall be installed in strict accordance with the company's printed instructions unless otherwise shown on the contract drawings.
- B. The gate and installation shall conform to ASTM F 1184 standards for aluminum cantilever slide gates, Type II, Class 2. See 1.02 C.
- C. If the gate system is to be automated, the gate and installation shall also comply with ASTM F 2200 and UL 325. See 1.02 A and 1.02 B.

3.03 SYSTEM VALIDATION:

A. The complete system shall be adjusted to assure it is performing properly.

- **B.** The system shall be operated for a sufficient period of time to determine that the system is in proper working order.
- C. For operated gate systems test and explain safety features:
 - 1. Each system feature and device is a separate component of the gate system.
 - 2. Read and follow all instructions for each component.
 - 3. Ensure that all instructions for mechanical components, safety devices and the gate operator are available for everyone who will be using the gate system.
 - 4. The warning signs shipped with the gate operator must be installed in prominent position on both sides of the gate.
 - 5. Ensure the owner is clear with regard to the safety points concerning the basic operational guidelines of the safety features of the gate operator system. These safety points are listed in the gate operator manual and must be read prior to system use.

